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I work for a non-profit organization in San Francisco, California. I'm going to tell you about the community we have in the Americas that is interested in computer re-use and computer refurbishing and asset management. We have something that we have developed in cooperation with Microsoft called the Community Microsoft Authorized Refurbisher program. There are hundreds and hundreds of them, some in Mexico, in this network of groups.

This is a potential way for Mexico to start participating with United States companies and organizations in a very light way to further develop electronics recycling and refurbishing capacity.

The NGO that I work for is called Tech Soup. Its job is essentially to supply NGOs around the world with all the software and the computers and the knowledge on how to set all that up. So that's our main mission in the world.

Our particular mission in computer re-use and computer refurbishing is to try to capture five year old or newer computers that come from anywhere and to increase public awareness on the value of adding life to a computer.

Then our mission is to provide a sort of collection system in the United States. So, for instance, one of the big collection entities in the United States is Goodwill Industries. We consider them among our group and they essentially collect many, many computers that can be fixed up and then used again.

We think that these used computers are mostly useful. They're mostly useful for schools and particularly schools in low income areas. They can also be useful to NGOs and non-profits and also to low income families.

We think we will be able to share things with you because we have a similar market. So this program that we run with Microsoft called Community Microsoft Authorized Refurbisher program is pretty big now. In the U.S. we have 686 refurbishers and asset management companies that are participating. We have 48, almost 50 in Canada anchored by something called the Computers For Schools Network there. (*numbers updated December 2008*).

In Mexico we have two and we'll soon have three. Orient Futura and Servicios Rescatec are in Mexico City and IQ Electronics is one that's interested in joining us. It's going to be the big Dell partner in doing of all Dell's recycling and refurbishment in most of Latin America. So that is a very important business that I wanted to tell you about.

In Latin America we have 17 refurbishers now. The biggest one is in Columbia. We have five in Brazil and we even have one in Trinidad. (*numbers updated December 2008*). So the model for this in Columbia is for it to be kind of a government sponsored program in that they work pretty well.

Our groups are 60 percent non profit and 30 percent businesses. Some are based in schools and only five percent are based in government. This program, Microsoft Authorized Refurbisher, is interesting to me and I would be very curious if people would ask questions about this, but the reason it exists is to supply very, very low cost legal Microsoft licensing to anyone who would be interested to fix up old computers or used computers and then supply them to NGOs or low income families or to schools.

The question I have of you is if there is a strong demand in Mexico for this licensing, which is \$5 for Window XP and \$5 for Office 2003. All of the computers, all of the basic software needed, can be purchased from this program for \$10 U.S. I'd be very curious to your reaction of that if that's too high a price or if that's a good price.

A little about a new version of this program which we don't run. Microsoft has stratified this MAR program, Microsoft Authorized Refurbisher program. It now has an OEM level to it for very large volume places. The pricing is higher for them.

A little bit about the people that run these reuse and refurbishing operations. Probably 700 or 750 refurbishers, most of them are very small with fewer than ten employees. They often use volunteers in North America, that's especially the case. They have an equal number of volunteers with employees. They often employ, and this is also the case with more recycling activities, more not so much refurbishing but recycling activities that it's a good area of work for sheltered employees. So you may have remembered Greg Sampson from Earth Protection Services. His program in Oregon has a number of workers with developmental disabilities who perform routine work and earn money disassembling and taking apart these computers. That's a common thing in this work.

The best equipment is the three to four year old equipment that comes out of businesses. We have found that equipment that comes out of homes is quite often the same as it would be in Mexico in which people hand their computers, once they get a new one, they give it to a relative, they give it to a child who is going to school or something like that. The computers out of homes are much older than the computers coming out of businesses, in universities and government. So we always try to get those computers first.

A number of these places, these refurbishers, do collection events.

This is a very light end of the recycling industry and a very good place to start developing some kind of real industry, we think. I'm very curious to see your reaction to this if you agree. Creating a refurbishing company or a refurbishing project doesn't take much. People can do it in a garage. They start collecting computers and they start fixing them up. You can sell them and you can get this inexpensive software.

You can also get money from grants if you are a non-profit or an NGO. Under this program, this MAR program, it's entirely okay to sell this equipment. You don't have to give it away to a school or an NGO.

I'm particularly interested if anybody has any ideas on whether \$5 Windows licensing and \$5 Office licensing is useful and good? And what would cause companies to come to us and want to join this group? So does anybody have information on that or any sense of that?

**[Guillermo Roman]**

No es cuestión. Guillermo Roman. What, in general, do they do after, at the end of life?

**[Jim Lynch]**

All of these refurbishers need to connect with an end of life recycler. They need to figure out how to get donations. Are computers coming to them on the front end? Then they need to connect up with a computer recycling company. Often they end up getting into that business more and more themselves. They get deeper into the recycling process. The next step down below refurbishing is called demanufacturing. This means taking apart the computers to harvest parts mainly and to separate things like cases and other things they can sell on commodities markets.

They now then become more like recyclers than refurbishers at that point. They start to expand their work. We have found when they supply over 400 computers per year, then they begin to start expanding like that and become a little more industrial.

Interestingly, to begin in this business, it takes almost no equipment. Almost none. You can do it just with almost no test equipment. It's almost the lightest industry possible.

**[Rodolfo Treviño]**

Gracias; buenas tardes. Rodolfo Treviño.

Me imagino que al momento de acopiar todos estos equipos y quererlos retribuir para que funcionen son necesarios componentes que sean compatibles, que sean..., pues de generaciones un poco más, si no las de punta, pero no tan atrasados para que sean compatibles con los sistemas operativos, etc. Cómo ustedes obtienen..., me imagino que algunos los obtendrán de algunos equipos pero llega el momento en que necesitarán hablar de compatibilidad y hablar de compra de insumos, compra de componentes; ¿eso cómo ustedes lo solventan?

**[Jim Lynch]**

The question is about, where do you get the parts that you need? Most refurbishers get all of the parts they need, almost entirely. They will, they collect about four computers to every one that they produce, that they supply out to somebody. The way that works is they'll harvest all the parts that are useable; RAM, hard drives, modem boards, all the other boards.

The interesting thing about our community is that we talk to each other quite a bit. We have a list serve, an email list serve. They share this knowledge about what works on what machines. They have these problems and say, I have this problem, how do get this hard drive to work in this particular machine? And somebody always says, oh, it's not so hard. Here's how to do it.

We've created a community that talks to each other a lot in this world. So sometimes they buy new parts and sometimes they buy parts on the secondary market also. But we kind of connect up. So if someone needs 100 modems, they just ship them to them. There's quite a bit of that exchange going on in this MAR community.

**[Female Speaker]**

Bueno, a mí me parece esta propuesta excelente; yo creo que antes que nada hay que luchar porque las cosas no lleguen a la basura, que se rehúsen. Bueno, y lo que yo quería compartir es que aquí en Tijuana lo que yo he visto es que hay mucho de este trabajo pero es informal, o sea, no hay negocios registrados. Yo conozco egresados del TEC de Tijuana que hacen esto, van a las ventas de garaje, así es esto, trabajo hormiga, recolectan todo, compran todo lo que pueden y lo pasan pero sin pagar aduana, o sea, es así, es un movimiento hormiga. Y trabajan en sus casas y lo hacen y sería mejor si tienen el apoyo técnico en cuanto a la tecnología y en cuanto a lo legal para tener sus permisos y, este, si este trabajo se formaliza puede tener mucho más éxito y; bueno, yo de aquí me llevo los datos que tomé para quien yo conozca darle la referencia, y gracias por este trabajo.

**[Jim Lynch]**

Muy buen, musto gusto. For us it is unnecessary for much permitting or much licensing to happen. The only thing that a refurbisher or anybody who is interested in joining us needs is to have a business license as a company. That's all they need. Then they can come to our website, which is also in Spanish and they can fill out an application. It takes about 20 minutes. It takes us about a few days to check their references a little bit and they can then participate and join this entire community of refurbishers.

We are very interested in having Mexican refurbishers and people interested in recycling to join us. We're very interested in this.

**[Elías Vanegas]**

Yo soy Elías Vanegas y pertenezco al Instituto Nacional de Recicladores. Una pregunta muy concreta: ¿ustedes cuándo se agota su equipo y ya que lo utilizaron para refracciones y demás, para armar nuevos equipos, este, comercializan con esto? Estos "scraps" o materiales que ya no pueden aprovechar. ¿Lo venden? Sí lo venden, ¿sí? Bueno. El asunto es este: nada más como referencia por ahí les menciono de que aquí en Méjico no hay gente que se dedica a esto, voy a dar un pequeño dato solamente del estado de Jalisco, del material del plástico de la carcasa de la computadora; nosotros exportamos a Estados Unidos 600 toneladas en lo que va del año, es una sola empresa nada más. También quisiera mencionar que en el

caso de también en otro Estado exportamos, este, 100 toneladas en lo que va del año de tarjetas de equipo de cómputo nada más; no fotocopadoras, no impresoras, no escaners, no multifuncionales, nada más. Hice un pequeño acordeón y también, este, puedo decir que a lo mejor estamos muy acostumbrados a ver negocios así muy luminosos en el cual se vea que se está haciendo un trabajo de recuperación de diferentes materiales; en este caso en los electrónicos hemos trabajado durante..., yo creo que unos 10 años, en el cual hemos generado una economía aunque sea muy pequeña o muy limitada pero ya estamos haciendo recuperación de este tipo de “scraps”. Les digo esto porque al parecer ahí decía alguien que 80 millones de equipos nuevos, ya se me escapó la cifra, pero está medio suelta esa información, no sé de dónde la sustentó, ¿no? Pero sí le quisiera puntualizar que estamos en el medio y sabemos de lo que estamos hablando para poder comercializar todos estos materiales y aprovecharlos, es todo.

**[Jim Lynch]**

One of the reasons I came here was to meet you and to find out about you. Because if this is an important, necessary market and a necessary thing that your group is doing for this to work at all and to start building a kind of a recycling infrastructure .